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DEVOTED TO MEDICINE, SURGERY, AND THE COLLATERAL SCIENCES.

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Lecture, introductory to a Course on the Principles and Practice of Surgery in the University of Pennsylvania. Delivered November, 1841. By WILLIAM GIBSON, M.D.

Professor Gibson's object, from beginning to end of this discourse, has been, he tells us, to speak for himself, well knowing that now-a-days every man must do that, or not be spoken of at all! Braving, then, or rather defying, the sarcasms which such self-glorification is apt to elicit, he has boldly undertaken the task of doing that justice to himself and his University, which he fears, amid the rivalry of conflicting interests, they may fail to receive at other hands. Presuming largely on the occasion of an introductory lecture, which we think fairly warrants the display of some amount of egotism, Dr. Gibson has furnished an outline of auto-biography, which, no doubt, was listened to with interest by the pupils assembled around him as the preceptor of their choice. This lecture Dr. Gibson has 'had much pleasure' in publishing, at the request of the class; and in publishing it he has at least weakened the force of the apology which he claimed in addressing it to his pupils. It is, however, a lively effusion, characterised by the sprightliness and vigour with which the Doctor generally writes. He was born, he informs us, some fifty years ago,—we suspected more,—in Baltimore; came to Philadelphia to study medicine, and heard his first lecture from his distinguished predecessor, Physick. Like other great men, Dr. Gibson had an early inkling of his future celebrity. Upon returning to his lodgings from this lecture of Physick's, he announced to his landlady his intention of one day occupying the professor's place. *En attendant*, Dr. G. went to Edinburgh where he graduated, after writing a thesis that

"Attracted the attention of reviewers, and was quoted by several scientific writers in England, but more especially by the Germans on the continent of Europe."

The Doctor afterwards became a private pupil of Sir Charles Bell, and, after remaining three years in all in Europe, returned to assist in getting up the University of Maryland.

"He was appointed to the chair of Surgery in that Institution; engaged extensively in private practice, medical as well as surgical, but chiefly the latter, and often made long journeys into Maryland, Virginia, and Pennsylvania, to perform important and difficult operations."

After a residence of nine years in Baltimore, upon the death of Dr. Dorsey, Dr. Gibson was called to the University of Pennsylvania. Dr. Physick abandoned the surgical chair to take the anatomical chair vacated by the death of Dr. Dorsey, and Dr. Gibson obtained the professorship of surgery. Almost immediately after removing to Philadelphia, Dr. Gibson was elected one of the surgeons to the Hospital of the Philadelphia Alms House, then situated in a central part of the city, but since removed to the western bank of the Schuylkill.

"For more than twenty years," says Dr. Gibson, "I have been the chief surgeon to the former and to the present hospital, have delivered an equal number of clinical courses, and during that time have performed as many capital operations as any hospital surgeon, perhaps, in the United States—owing to the hospital being more than twice the size of any other in the country, and to my having had always charge of the wards during the winter months, when the patients are most numerous and the cases most interesting. Within the last eighteen months, however, my colleagues and myself have consented to relinquish one half of our wards in favour of other schools of the city, not wishing to monopolize privileges which others for a long time have been anxious to enjoy conjointly with ourselves."

There are some inaccuracies in this statement. Dr. Gibson has never been *chief surgeon*, but one of four surgeons, to the hospital. It is, as he says, probably larger than any other in the country; but, since it has been removed to the buildings over the Schuylkill, it has never had the same amount of accidents and recent surgical cases that are to be found in the wards of the Pennsylvania Hospital. Some

of the physicians and surgeons to the Philadelphia Hospital, it so happens, are professors in the University of Pennsylvania and the Jefferson Medical College, but we hardly think Dr. Gibson justified or politic in representing the hospital as an appendage of either or both of these institutions.

So much for the Professor's account of himself. We may add that he is a portly gentleman, of very pleasing address, a capital lecturer, gifted in a high degree with the ore rotundo, perspicuous and forcible in his language—but here is a portrait of 'an able and successful lecturer,' which, it may be suspected, was drawn from the original whom we are discussing. The natural qualities of such a lecturer are,

"An easy, quiet, and composed demeanour, a simplicity of thought and action devoid of all affectation, a manner free from embarrassment of every description, a clear and distinct enunciation, a voice sufficiently powerful to reach the most distant hearers, susceptible of modulation, marked by peculiar intonations, so regulated in its cadence as never to terminate abruptly, and with great capability of emphasis, whenever the necessity of such power may be called in requisition. If, to these natural attributes be joined good common sense, steadiness of purpose, a laudable ambition to excel, a natural love or turn for the subject to be taught, that will cause the bosom of the speaker to glow with enthusiasm and enable him to rouse and keep alive the attention of his hearers and fix it upon important points which he wishes to imprint indelibly upon the memory, while he descants soberly and quietly, and in the plainest possible style of elocution upon common place topics; if I repeat, to these natural qualifications there be added intimate acquaintance with the best authorities of the profession, ancient and modern, a profound knowledge of the subject, the result of experience or personal observation, associated with the power, rarely possessed, of separating the useful from the useless, of winnowing the chaff from the grain, joined to peculiar tact in presenting in the most palatable, but most solid and simple form every intellectual viand, garnished by the dainties that a liberal education can always throw around, such qualifications are sure to be followed by success; and will, in every possible way, richly deserve it."

Appended to the auto-biography, are some well conceived and expressed comments on the degrading pruriency of the day for surgical distinction through the medium of cutting and slacking. The importance of medical surgery is strongly urged, while operative

surgery is to be deemed secondary and subordinate in its aim and application, not, however, that he undervalues the latter, holding, as he does,

"The highest respect and veneration for the man who, with a mind imbued with the profoundest knowledge of his profession, as shown by a general acquaintance with all its branches, can boldly and unerringly, and with matchless dexterity, plan and execute, successfully, operations which the mere professional mechanic would shrink from with apprehension and dismay, or be totally unable to comprehend; thereby demonstrating that it is the combination of medical and operative talent that constitutes the prerogative of the great surgeon, and makes him a blessing to mankind."

Dr. Gibson does not forget to call attention to the "sixth edition of his *Institutes of Surgery*, just issued from the press," and makes an eloquent and just appeal in favour of the antiquity and long established reputation of the school with which he is connected. The Doctor, also, cautions diffident and nervous students against the mistaken idea that the examinations are so rigid in long established institutions as to render it very difficult for them to obtain a diploma. He assures them "that there will be no possibility of a pupil being rejected who is at all acquainted with his subject." These and other tempting promises we have no doubt the Doctor will amply fulfil.

The Western and Southern Medical Recorder. Edited by JAMES CONQUEST CROSS, M. D., Professor of the Institutes of Medicine and Medical Jurisprudence in Transylvania University, &c.

The first number (for the present month) of this Journal lies upon our table. It is an octavo of forty-eight pages, designed to appear on the first Monday of each month.

We welcome it as a medium of communication with the School of Transylvania, and the science of the highly cultivated city of Lexington.

The Introductory Lecture to the Course of the Institutes of Medicine, in the University of Pennsylvania, for 1841-2. By SAMUEL JACKSON, M. D.

This is one of the most agreeable introductions we have met with, and adds not a little to Dr. Jackson's reputation as an eloquent and instructive lecturer.

The lecturer begins with the examination of the studies and mode of commencing necessary for a physician; after some introductory remarks, he illustrates the subject by a reference to a symptom—cough—sometimes of no value, expressing nothing but an irritation of a distant organ; sometimes a nervous cough, dependent upon a general disorder of the nervous system, and sometimes a “protective, preservative” action, expelling injurious substances—whether introduced from the exterior, or formed by the organ itself,—or a strictly curative action, “to be respected in the treatment of the case.”

Passing then to the study of the difficulties of medicine—as a mixture of art, science, and philosophy—a passing attention being given to the spirit and mode in which it was cultivated by the ancients, and the difficulties which continually obstructed it—we arrive at a new era, beginning with John Hunter, a great and original genius.

“John Hunter stood alone in that thick night, that had palled the science of medicine, for ages, in the dunkest cloud of ignorance. His genius, heaven-lighted, shone like a brilliant Pharos, throwing its illuminating rays into the surrounding gloom, giving a new direction, and animating to new exertions the long benighted wanderers of medical science. The whole face of the science soon changed. He introduced experiment into physiology, and at once constituted it a science. Every department of the physiological sciences was the object of his research, and felt the animating influence of his genius. He originated comparative anatomy and physiology, the cultivation of which is rapidly laying open the otherwise unapproachable mysteries of the human organization. Surgical and medical pathology, before entirely conjectural, assumed from his principles a more positive character, and to which could be fixed some specific ideas.

“It is true, that many things now well understood, John Hunter saw but dimly shadowed in the darkness which his genius was dispelling, unaided by other lights than his own. He laboured, too, with difficulty in attempting to express, in language, new phenomena, to convey to other minds the great conceptions with which his own was teeming, and that had never before entered the thoughts of man. His style is obscure. His expressions are not the most definite or precise. This is the carping criticism of little minds, incapable of estimating original men, *true men*, who delve in the depths of nature and penetrate the inmost recesses of thought.”

Another mind, which has produced nearly as powerful, and perhaps a more extended

influence, is that of Bichat, whose life was so early sacrificed to his unremitting labours:

“Bichat may be considered the principal originator of positive science in the medicine of France. He did not, like Hunter, stand alone. Bordeu and Pinel had preceded him, and the illumination of their minds, had already dissipated the first difficulties of his path.

“The genius of Bichat was active, brilliant, and vigorous; but it did not possess the depth, and energy, and extent of that of Hunter.—The light that emanated from Bichat's intellect, was concentrated on a few objects and thrown in one direction. Those objects were seen distinctly, and the impression they imparted was vivid and exciting.

“Hunter's mind irradiated far, and wide, and in every direction, the deep obscurity of the science: but often the things discovered were not seen in a full and striking outline, nor their connections clearly displayed.

“With less power, Bichat, probably, imparted a more vigorous impulse to the scientific movement of medicine, than Hunter, with his greater depth and profounder knowledge.”

Haller is also mentioned as one of the most eminently practical and laborious cultivators of medicine, looking far beyond his age, and obstructed rather by the imperfect condition of the collateral sciences than from want of labour or deep searching sagacity.

Returning again to the oft-quoted and admired Hippocratic axiom, which is the introductory sentence of the lecture, *Ars longa, vita brevis*, Dr. Jackson inquires into the present state of medicine, forming a picture, correct, indeed, in most respects, but by far too discouraging, of the pretensions of medicine in its actual state to the title of a philosophical science. It is undoubtedly true that it is still most imperfect, in a state of transition, destined to approach much nearer to demonstrative truth, and to admit of much more correct and just relation of the phenomena of disease and the remedies which we are able to apply; but still a multitude of leading facts are known and settled; and, although our remedial means too often fail us, our powers of prediction and discrimination are not often at fault: much is settled and positive, much will undoubtedly become so, and something will in all probability ever remain obscure and incapable of sure analysis, for we are living, feeling beings, and the rigour of calculation which is possible in the relations of the inorganic world, must often be baffled by the numerous control.

ling influences to which the human body and the human mind are exposed.

"At the present period, the utmost activity pervades the science of medicine. It rapidly hastens to its completion. No department is left unexplored. Facts are rapidly developed, tested, and established by positive and reiterated observations and experiments. It is not a single though a glorious intellect that brightens, for a space, a darkened region; but from every nook and corner, and "coin of vantage," stream out gleams of light, whose aggregate illumination lighten up every recess and department with the brilliancy of day.

"More than three thousand years have witnessed the progress of medicine. Yet, you perceive, Gentlemen! that it has not been perfected, as a science, indispensable to its completion as an art. How just, then, the axiom which heads this discourse—*Ars longa.*

"If medicine, as a science, from the number and diversity of its phenomena, has not yet reached its fulfilment, the time is still distant when it may be approached as a philosophy. As science is necessarily preceded by art, so philosophy must follow on the cultivation of science. In the present state of the science, the philosophy of medicine must be limited to cautious generalization of its principles.

"Art, Science, and Philosophy have been spoken of as distinct departments of knowledge. That our meaning may be more clear, it will be proper to exhibit their differences.

"Art is knowledge acquired by experience. Its facts are simply historical, unconnected with their causes or the laws that compel their existence. The facts themselves are applied in practice, without an understanding of their operation. The practice of the art is then empirical.

"Science is the knowledge of phenomena, in their relations of cause and effect, and the determination of the fixed laws that govern them. Nothing in the creation is a random result. Every thing has been foreseen and provided for. Every phenomenon occurs in the order and connexion intended for it. Some phenomena are constant, the series to which they belong are always in action, and they are regarded as immutable.

"Thus, respiration of atmospheric air, circulation of blood, development of nervous power, vital activity, are an immutable series of phenomena. One cannot change without all being affected: one cannot exist without, or independent of the other. They establish a law of life. But all the physiological phenomena are equally permanent: they all result from equally established laws, necessarily productive of each phenomenon in its appropriate series, and in its position in that series. If the natural conditions are all present, for any organ, its functions or phenomenal acts must exist. The stomach must digest, a gland se-

crete, a sensory nerve feel, a motor nerve excite, a muscle contract, a sense give perception. The law is positive: the effect must ensue, when the cause is present.

"But the same positiveness attends on the occasional, or contingent phenomena, as they are manifested in disease. An inflammation, a fever, a palsy, a spasm, an abscess, vomiting, purging, any possible modification of the state of an organ, or its function, as they may occur singly or in combination, are not less the result of laws provided for their occurrence.

"They are parts of series, or formulas of phenomena;—have each their cause preceding them, as they are the causes of what necessarily follows them. There can arise no possible combination of the numerous elements, that compose the living organism of man, many of which have, probably, not yet taken place, but the law already exists, that determines the phenomena that do, or that will result.

"Science then consists in the ascertainment of the existence and nature of phenomena, the arrangement of them in their specific categories, and the invariable order of their connexion. When this has been accomplished, a law of nature has been discovered, immutable in the production of the phenomena that obey it.

"Science can be predicated of no scheme of knowledge, if the phenomena of which it treats, are not connected in a chain of dependant facts, arranged in the order of their connexion.—When this has been effected, science is finished, and is positive. The possessor of it, has the power, any fact being given, to assert all that had preceded that fact. He traces the filiation of its antecedent phenomena to the primary or fundamental cause; and he can predict all that will ensue, from knowing the links that depend upon it. But a knowledge of the laws of nature, enables us to control them, to modify and bend them to our purposes. Science arms us with power; and the man of science is more efficient, yet safer, beyond calculation, over the mere man of art, or yet ruder empiric.

"Philosophy is unconnected with the research into causes and effects. Phenomena, the object of the senses, and the subject of science, belong not to philosophy. It is the development of general truths by the operation of the mind, from pure reason; the establishment of fundamental and primary facts, the governing principles of the phenomena of the universe, all combined in one unity of plan, emanating from the divine creative intelligence, that compose the great questions of philosophy. These are subjects not cognizable by the senses; that are beyond the grasp of the understanding, that exist independent of matter or phenomena: they belong to the divine idea, and can be comprehended only by that feeble emanation of the divine intelligence, imparted to man in his Pure Reason.

"In the natural order of acquiring knowledge, were human knowledge once perfected, the commencement would be the study of philosophy, or the reason for the existence of phenomena, and the laws they obey: the second step would be the knowledge of science, or of the laws governing and arranging the production of the phenomena; and, finally, the last subject of investigation would be the phenomena themselves, and the application of knowledge to accomplish results."

"From this view, it is fairly apparent, that medicine is yet imperfect as an art, incomplete as a science, and almost wanting in philosophy. Again we find most true is the assertion: *Ars longa est.*"

The difficulties of the science, in the abstract, are increased by the imperfect power of each individual to master it in its present condition; hence, too, many content themselves with the mere practice of the art; and some, degrading it much farther, look upon it only as a trade by which they are to gain their bread, without ever reaching the complex but yet established rules of art. In fact, there is no complete divorce between the art and the science, the former cannot be well understood without a knowledge of the latter, and he who would remain a mere workman degenerates into an empiric. Another, and still a numerous class, rely upon a false art, much inferior in morals to the true but imperfect therapeutics of medicine, put forth false pretences to cures, or embrace some false system which may for a time enjoy a passing notoriety. How much may be done by each individual, and how much labour is required and is due from every aspirant to the profession of medicine, is fairly set forth.

"The second point of view, in which it was proposed to regard the length of art, contrasted with the shortness of life,—*vita brevis*—was, in reference to the individual capacity, in becoming perfected in the art of medicine.

The expansion given to medicine by its cultivation as a science, the creation of many new departments of research, the acknowledged supremacy of science over mere art, undoubtedly render a complete knowledge of the medicine of this period a work of immense labour, but of proportionate value. It can be accomplished only by application and perseverance, conjoined to strong natural abilities. Velpeau is a living example of how much can be done, and well done, by one who is determined to accomplish all that lies within the reach of his capacity.

From the difficulties that attend an extended knowledge of medicine, there is a strong tendency manifested to cultivate the specialities of

the science. Some one branch of investigation, some department of the profession, or some one class of diseases, is selected, to which there is an exclusive devotion of time and application.

To a certain extent this method possesses some advantages. It must not be carried too far. A speciality cannot be detached from the science: it is a part of it, and can be properly understood and treated, especially the exceptional or irregular cases that must arise at some time, only when the general principles of the science can be applied to the explanation of its phenomena, whether regular or anomalous.

There is another source that adds to the difficulties encumbering medicine, as an art, and increases the obstacles to the being perfected in its practice. This source is, in addition to the number of pathological affections and their attending symptoms, the incessant revolutions that characterize diseases. No fact is better substantiated than that diseases, from some unknown laws that influence the vitality of living beings, especially man, present themselves in constantly varying forms. This instability of disease baffles experience. At one period, there prevails a uniform inflammatory tendency, and the anti-phlogistic and evacuant methods of treatment are more or less applicable to most cases of disease that occur during the ascendancy of that constitution.

Soon after follows another constitution the reverse of this. All diseases take on a low or typhoid type,—the adynamic and ataxic states of disease,—and a sustaining method is demanded.

At another period, malarial diseases spread over extensive districts, filling every habitation with protean forms of febrile disease,—simple and malignant intermittents, pseudo remittents, and anomalous nervous disorders,—for which the great remedy cinchona or its alkaloids, must be relied on as the basis of a treatment.

Other prevailing forms might be enumerated, but these will suffice to establish the position we have laid down.

Intercurrent with these universal epidemic constitutions, occur especial epidemics; as small pox, measles, scarlet fever, influenza; all of which are modified, in each period of their return, by the prevailing constitution, and require a corresponding modification of treatment.

The epidemic constitutions that have been designated, succeed in cycles varying in duration from ten to twenty years, with intermediate cycles, marked by no particular influence.

From this fluctuating movement of disease, the practice of medicine never can be settled down on established formulas, determined remedies and doses. A physician should never harness himself to any doctrine or to any prac-

tice. The experience, tact and routine, he has acquired in one cycle suddenly fail him when a new one sets in. His studies, observations and experience, in treating disease, must recommence again for each succeeding cycle of disease, as it circles in the course of time. The shortness of life,—*vita brevis*—scarcely admits of perfectness in an art, at once complicated and changeable, without zeal, assiduity and devotedness to the acquisition of knowledge.

This picture of the difficulties of your professional life is no exaggeration. It is not intended, in presenting them to you at this time, to discourage you, but to prepare you to expect,—to encounter,—to vanquish them.

Half of the difficulties that necessarily beset us in life disappear when we know what they are. The means to avoid, or when avoidable, to overcome them, become apparent.

It is evident, from the nature of the difficulties that belong to medicine, as it is now constituted, that they arise from the paucity, or want of fixed principles, and of the ascertained laws of life, which would furnish an explanation of all its phenomena, and a clue to the means of governing them, as far as they are susceptible of control by human means.

Although the principles and laws of the whole science are incomplete, yet many are fairly established, and applicable with success to the solution of perplexing symptoms, and the treatment of intricate cases.

In your studies, then, endeavour to lay hold of the fundamental, or primary phenomena of the animal organism. From these commence, and consecutively follow all the phenomena that you are called on to observe and comprehend.

When you possess these, you have the compass and the chart that will guide you in safety, though your way be trackless. You must take care, however, that you mistake not secondary for fundamental phenomena, and assumptions for truths,—the wreck of so many ambitious hopes, the cause of so much self-deception!

There are fundamental truths in medicine. They are known by their perennity. They have never been entirely lost to the science, even in its gloom and depression, but have always reappeared, whenever an original mind has applied its forces to the investigation of phenomena, and sought in the recesses of its reason for the laws of their existence.

The most important of these, on which medical science must ever repose, and must always form the basis of a sound practice, I will now present to you, as the commencement and the ending of medical investigations.

As these principles are present or absent, in any doctrine of medicine, will it be a truth or a fallacy.

These primary or fundamental facts of the

first consequence, may be arranged in the following series:

1. Life is a result of an unknown force, consonant to all the forces of nature; entering with them in the unity of plan on which the Creator has constructed the universe. It is called the vital principle, or organic force.

2. This principle or force is, consequently, in relation with all the other forces of the universe: is influenced by, acts on, and re-acts with them.

3. Its activity is exerted exclusively on organic matter, and is displayed alone in animated organisms, or living beings, vegetable and animal.

4. The essential character of its mode of activity is movement: the cessation of movement is death: its activity is excited and maintained by the forces of external and internal agents.

5. The direct phenomena of life are effects or results of the actions and re-actions occurring between the vital principle or organic force, external forces, and organic matter. In the action of this triad, the organic force is the primordial principle of life; organic matter, in a fluid state, the primary element of life; external forces—caloric, electricity, oxygen—the primary excitors of life: organization is the result or product of vital activity.

The secondary phenomena of life, are the functions or offices of the organs. The organs are the instruments, the functions are the means of life, in the higher animals. The functions produce and maintain the indispensable conditions of the primary vital phenomena, while they are, at the same time, dependent on the primary phenomena for their existence.—*Abuentes in cirrulo*.

The functions form two distinct classes. The one class, purely chemical and mechanical in their nature, produce and maintain the organic and physical conditions of life. They are, the digestive or alimentary functions, respiration, circulation, secretion. They constitute the functions of organic or vegetative life, in the works of Physiologists.

The second class comprise the sensory and motor powers of the cerebro-spinal axis, and the contractility of the muscular fibres—irritability of Haller. They are the vital forces of Haller and others; but are clearly nervous functions. They are Dynamic functions, and their forces are the causes of the actions of the first class. They are known as the functions of animal life in systematic works.

7. The organic or vital force, in the production of phenomena, exhibits the following especial orders of phenomena:

a. It is creative: From a formless fluid organic matter—albuminous in animals, gummy in vegetables—there is developed, as the first result of its activity, germinal points, or nucleoli and nuclei; from which proceed germinative cysts, from which again are produced

tissues, organs, living beings: the whole and each part constructed from an ideal type, existing in the eternal and creative intelligence of God.

b. It is conservative: The organization of living beings is never persistent. Every atom of every tissue is dying and re-produced at each moment of time. Life and death are inseparable and necessary relations.

But the form, the composition, structure, properties of each tissue and organ are preserved and re-produced always the same, under the same circumstances. The conservation of the natural condition, is the prolongation of the creative action of life.

c. It is medicative or therapeutic: The re-actions producing vital phenomena are subject to be disturbed by the action of numerous exterior forces, that are not in relation or harmony with the vital principle or organic force, either of the whole organism in its unity, or in some of its special manifestations in particular tissues and organs. This perturbed condition of the physiological re-actions of life, would necessarily end in the destruction of the natural organization, by perverting or suspending its formative and conservative operations. But provision is made to guard the economy from those destroying influences. The re-actions excited in the organs, or general organism, and the disorder of functions, named symptoms, are, for the most part, protective or recuperative processes, by which the economy is rescued from impending mischief and danger.

Vomiting, purging, expectoration, sweating, diuresis, a haemorrhage, an inflammation, fever, even spasm and convulsions, are pathological functions that expel offending causes, depurate the vital fluid, or dispel a pathological condition that has taken root in some tissue or organ, and whose function is injured or destroyed.

The disease belongs essentially to the modification of the vital activity, disordered and perverted in its mode of action. The symptoms of the disease, which we name, and too often regard as essentially the disease, are, in reality, the defensive and curative operations of the economy. Let us be on our guard that this false view do not betray us into dangerous interference with that which is salutary in its intention.

The physician, in his true character, is the minister, the interpreter, the adjuvant of nature; not her master. He guides, controls, follows, obeys as she dictates and requires; or he wisely suffers her to complete her own work, when the laws and means she operates by, are adequate to accomplish the end.

There is one more fundamental principle, to which I would direct your attention.

Diseases once established, have a regular course to run, and observe laws for their recovery. All reactive diseases must, in a defi-

nite time, come to a conclusion. They must end in recovery, or death, or a chronic disease of the affected organ, most generally the consequence of a change in its structure.

When the constitution is good, and the disease not so powerful as to break down the vital forces of the organs, a recovery must ensue. These spontaneous cures are the boasts of the pretender; and, to the ignorant, the evidence of skill.

There can be no doubt as to the good tendency of lectures conceived in this earnest and elevated strain. They form the mind and character of the pupil, and inspire him with the enthusiastic devotion to his science which is at last the only real guide to honest, legitimate success.

THE MEDICAL EXAMINER.

PHILADELPHIA, NOV. 27, 1841.

OPERATIONS IN COMPLETE ANCHYLOYSIS OF THE KNEE.

We had the gratification of witnessing, on Wednesday, Nov. 21st, an operation by Professor Gibson, at the Philadelphia Alms-house Hospital, for the cure of the deformity resulting from perfect ankylosis of the knee-joint in a negro apparently under middle age.

The coalescence of the tibia, patella and femur appeared to be complete, and the leg was fixed in the flexed position, forming an acute angle of about 60 degrees with the os femoris. We arrived, unfortunately, too late to examine the position of the limb with accuracy before the patient entered the anatomical amphitheatre. The operation was of the same character with that first instituted by Dr. John Rhea Barton, and consisted of the removal, by the amputating saw, of a portion of the condyles and body of the os femoris as near as possible to the knee-joint; the fragment removed being angular, with the angle corresponding, as nearly as possible, with the posterior face of the os femoris.

The nicety of the result depends upon the accuracy of the eye of the operator in removing just so much bone as is necessary to bring the limb into an attitude perfectly straight and useful, and upon the close approximation of the incision to the obliterated knee-joint. The latter caution reduces the subsequent deformity resulting from the prominence of the patella—which, of course, remains attached to the lower frag-

ment—to a minimum. It is necessarily considerable, under any circumstances.

The first incision, with the scalpel, commenced on the inner side of the leg, at a point corresponding with a transverse plane touching the posterior surface of the condyles, and was carried directly across the limb, as nearly as possible to the highest anterior elevation of the condyles, to terminate on the out side of the limb, at a point corresponding with the same transverse plane. A second superior incision extended from the inner extremity of the first nearly to its outer extremity, sweeping in an arc across the front of the thigh, so as to include a crescent just sufficient to lay bare the proper amount of bone after the contraction of the skin. These incisions were carried down the bone—the marasmus of the two vasti and the rectus muscles having nearly obliterated them. The flap was then dissected up, from the interior to the exterior angle, and left pendantly the latter, where the crescent was allowed to remain incomplete in order to preserve the vitality of the flap. The bone being thus exposed, the amputating saw was applied, first, nearly in the line of the first incision, and then, as nearly in the direction of the second incision. From below, the saw passed somewhat obliquely upwards, and, from above, with considerable obliquity downwards;—the two planes of division meeting in a line corresponding very nearly with the posterior surface of the bone in the depression between the condyles, and separating a piece including *considerably more than a right angle*, which was rendered necessary by the acuteness of the flexion of the leg. The posterior portions of the scroll formed by the condyles being but partially divided, on account of the proximity of the popliteal vessels—a wound of which would have rendered immediate amputation requisite, of course—these portions were carefully separated through the greater part of their thickness, by means of a narrow-bladed resection saw. The few remaining bony connections between the fragments were then readily broken by increasing, a little, the flexion of the limb.

No attempt was made, immediately, to extend the leg. The flap was returned, over the cavity made by the excision of bone, and its edges were secured, by suture, to the edges of the remaining skin, above and below. The

patient was then removed from the amphitheatre, and the limb was placed at rest on a double inclined plane, without any immediate attempt at extension.

It is proper to state that these observations were made at the distance of several feet, and where motives and intentions are given, they are deduced from the language of the operation itself, which was neat, clear and plain, needing no interpreter. This diminishes our regret at the impossibility—from press of occupation—of hearing either the preliminary or the concluding remarks of the operator. This mode of treating ankylosis is novel, having been performed, we believe, but twice upon the knee—once, only, before the present case, by its originator, Dr. Barton. No further apology for the minuteness of the description need be offered. The result will be made known in due time, but we may safely say, even at present, that the proceeding, though apparently formidable, is merciful in conception and trivial in danger to the horrible method of M. Louvier, commented on in number 46, (page 738.) It is applicable, of course, only in complete ankylosis. In that form of the disease in the knee which depends upon muscular contraction and ligamentous changes,—false ankylosis,—the late experience of surgeons in this city, appears to prove that the deformity is always curable, and generally with very little difficulty or pain, by machinery alone: and there is no hardihood in the prediction that the lately favourite plan of cutting the ham strings will soon be classed among the unwarrantable and universally condemned operations.

Several points in this interesting case are worthy of further remark.

The profession is generally aware that, many years ago, Dr. Rhea Barton performed a most ingenious, though severe, operation at the Pennsylvania Hospital, in a case of total loss of motion in the hip-joint, with an unusual position of the limb, which rendered it useless. We have not time, at this moment, to refer to his published description of the case, and memory, at this distance of time, does not enable us to recall the precise cause of the accident; but, the muscles of the thigh and pelvis being in a healthy condition, Dr. B. proposed to divide the os femoris above the lesser trochanter, as nearly as possible to the origin of

the capsular ligament, and, by establishing there a pseudarthrosis, to place the limb under the command of the muscles. The operation, though very troublesome and terrible in appearance, was, at first, successful; but, we believe,—standing subject to correction if in error,—that a permanent and inflexible union between the fragments ultimately took place, after an interval of six years, notwithstanding the motions of the limb in walking. The proper direction of the member, however, was effectually restored.

In conversation immediately after the operation, Dr. B. suggested to a few surgical friends the possibility of restoring the usefulness of the forearm by similar means, in cases of complete ankylosis of the elbow-joint. We then expressed our conviction that the plan would not succeed, because the bond of union, under all ordinary circumstances, would either become completely osseous, or, as was more probable, so unyielding from the tenacity of the chondroid or imperfect bone deposited between the fragments, that the muscles, acting, as they must, at great mechanical disadvantage, would prove unable to command the limb. We believe that the experiment has never been tried upon the elbow. When, more recently, Dr. B. first operated upon the knee, the nature of the case did not admit of any hope of the result suggested by his former case. The object was merely the removal of a deformity; and to this extent it is understood to have been beautifully successful. The same remark is true in relation to the operation of Professor Gibson. But whatever may be the present view of the original suggestor of the question, the impossibility of restoring a limb to a certain degree of usefulness by the formation of pseudarthrosis near some of the joints, under favourable circumstances, is not by any means decided. In the knee, however, such a result appears extremely improbable. Independently of the wasting of the muscles—a condition which may be regarded as merely temporary where motion can be re-established—the breadth of the surfaces of bone where the division is necessarily made preclude the possibility of much motion, while their form renders almost impossible the attempt at the formation of a true joint, with a regular capsule, which occurs occasionally—where it is unfortunate instead of beneficial—in pseudarthrosis of the shaft of a long bone.

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All that can be reasonably expected—all that is expected, we presume,—from the operation immediately under review is, an inflexible and tolerably straight limb. The march of a patient with a perfectly stiff knee is painful and difficult, and the degree in which the comfort of the patient may be really promoted by the operation is a decided, though highly interesting experiment. We shall await, with some impatience, the opportunity of personal observation as to the result, and will then make it the subject of further notice. The actual freedom of locomotion after the recovery, will determine the relative merits of this ingenious mode of treatment, and the amputation of the leg immediately below the knee. For the adoption of the latter method, these cases of complete ankylosis are more favourable than any others, because the obliteration of the joint allows us to remove the leg so completely as to leave no obvious stump, without obliging the patient to bring the pressure of the necessary wooden leg upon parts ill adapted to sustain that pressure. When a patient habitually rests the weight of the body upon the head of the tibia in a kneeling attitude, the skin, instead of ulcerating or becoming tender, is rendered thick and callous; and the construction of wooden legs is now brought to such a perfection that the regular motions of both the knee and the ankle, as well as the combined action of the toes, can be very perfectly imitated at an expense quite within the ability of persons in tolerably comfortable circumstances. We are not perfectly sure that such a wooden leg, which can be used almost without detection, would not be preferable to the natural member with a perfectly stiff knee, for those who can afford from fifty to seventy-five dollars for the purchase of a perfect apparatus.

The chances of life will probably prove to be considerably greater in the operation of Dr. Barton than in amputation, especially if certain cautions adopted by that gentleman and Dr. Gibson should prove to be less important than they are at present esteemed. They will be canvassed presently. The operation *appears* sufficiently formidable, it is true, but, in the wasted condition of the muscles, the parts divided, though bulky, are not of vital importance. No material amount of blood is lost. No great shock is given to the nervous system by the division of important branches. The dangers of secondary haemorrhage and phlebitis

are not enhanced by the injury of large vessels; and the principal danger may be supposed to result from the suppuration of broad surfaces of bone which are not immediately placed in apposition, protracted, *it may happen*, by exfoliation in occasional cases.

The precaution against the immediate or rapid extension of the limb, so decidedly recommended by Professor Gibson, and advocated, if we are rightly informed, by Dr. Barton, is based upon the supposed injury to the popliteal vessels from a sudden change of position. This delay, if necessary, is seriously unfortunate, for it materially protracts the cure, and increases the chance of local and constitutional accidents. We are not prepared to condemn it, but, based, as it is understood to be, upon the accidents to the humeral artery during the forcible reduction of old luxations of the os humeri, two instances of which have been given to the public by the operator, we may safely make a few comments upon it, which will no doubt be estimated at their proper value.

In luxations of the shoulder, the change in the relations of the parts produced by the reduction is very considerable. If the humeral artery should have formed close adhesions to the new formed ligamentous connections of the nascent new joint—which must be torn in the reduction—a portion, and, generally, a small portion, of the artery must suffer either an elongation, *measured by inches*, or a rupture of its coats. The latter is the more probable result. But, in the extension of the leg in the case under review—performed as it is about an axis but little removed from actual contact with the popliteal vessels—the elongation of those vessels, if worthy of calculation at all, *must be measured by lines*.—There is, in this case, less danger of adhesion, because there is no attempt at the formation of a new joint, and there are, usually, no new ligamentous connections distant from the original articulation on pursuing unusual tracks, or placed beyond the cognizance of the surgeon, so as to entangle the vessels. Without pretending, then, to decide that no peculiar formation may render necessary the precaution described in some rare instances—and our examination of the case under review was not sufficiently accurate to warrant a question of its propriety in the present instance—it is legitimate to infer that the speedy—not, perhaps, the immediate—extension of the limb is generally admissible when no very considera-

ble force is required for the purpose. The contraction, or rather the positive shortening of the flexor muscles and tendons, will be found practically to offer sufficient resistance to secure the artery against any danger from too rapid extension; and far be it from us to recommend that this resistance should be overcome by *cutting the ham-strings*, as an ultra tenotomist would be compelled to do for the sake of consistency!

If these views be correct, it will prove advisable in most cases to apply a moderate extending force, almost from the moment of the operation; for the sooner the two surfaces are brought nearly into contact the less will be the extent and duration of the suppuration, as well as the chance of exfoliation and constitutional accidents. The rapidity of cure, and the certainty of firm union—if the latter be really desirable—will be greatly increased by this method of action.

We have extended these remarks much beyond our original intention, but not beyond the merits of the subject. The operation will be repeatedly performed, no doubt, by other surgeons, and happy will it prove if it be always performed with equal skill, and a prospect of as happy a termination.

R. C.

Through inadvertence, credit was not given to the American Journal of the Medical Sciences, for the article by John B. Zabriskie, M.D., from which extracts were made under the Domestic head in our last number. Such neglects occurring in this Journal are never intentional, and we trust they will be rare.

THE COURTLANDVILLE TRIAL FOR MAL-PRACTICE.

In the number of the Boston Medical and Surgical Journal for the tenth instant, there are some remarks upon this case, which we reviewed in a late number of this Journal (page 712) in a spirit, perhaps, of too great mildness. We were willing to believe, in charity to the profession, that parts of the medical testimony on the trial were incorrectly or incompletely reported; or that the questions were so put by counsel—as very frequently happens—that the general nature of the answers rendered them less directly applicable to the case at issue than they appear to be in the words of the reporter. But the sentiments expressed in the following extract

impel us to define our position in terms not liable to be misunderstood.

"Prosecutions for mal-practice are pretty much of a piece with those for a breach of promise of marriage, and are looked upon by the discriminating public in a similar light. They are in general a pretext, and that is all, for sponging a little money out of some one who has got more than the plaintiff; although sometimes, were it possible to probe to the bottom of the motive, it would be found to be an arch scheme which for ruining the reputation of the defendant. In all trials for mal-practice in medicine and surgery, our sympathies are in the first place enlisted on the side of the defendant, knowing, as we do, from years of critical observation into the history of these litigations, that the public good, humanity, benevolence, philanthropy or any other praiseworthy object, is in most cases entirely out of the question.

We hope this report will have an extensive circulation, as, aside from any local or personal object, it will have the effect of putting surgeons on their guard against unprincipled patients and their special friends."

There can be no doubt of the benevolent motive of our friend the Boston editor, in directing implied censure upon the plaintiff and his "special friends," for we know him for an amiable, kind-hearted, and truly hospitable man. That we have not "shared his board" is owing to no lack of courtesy on his part, and should we ever be compelled to "prove his brand," we trust it will be *in tournament and not in fight*. We can even sympathise with his leaning towards the profession, but cannot forget that the first professional duty is towards the patient; nor have we now to learn that though malignity and sordid calculation are no infrequent instigators of prosecutions for mal-practice, it is quite possible for medical men, in these days of easy graduation and multiplied professorships, to be guilty of culpable neglect, or—in the existing condition of many medical schools—scarcely blameable ignorance. It is not improbable that our friend may be in possession of information in relation to the case which has not reached us, otherwise we are at a loss to account for the implied charges of evil motive in the plaintiff. A latitude was granted in the presence of unprofessional witnesses at one of the consultations, which would not have been permitted by the law of ethics established by Dr. Percival, or tolerated in Philadelphia, though our

"——Committee men and Trustees"

are not at all remarkable for the absence of curiosity or the presence of delicacy in intermeddling with affairs beyond their knowledge and their province. But there is nothing on the face of the pamphlet of Dr. Shipman that would warrant us in impugning the motives or the conduct of the plaintiff or his friends.

On the contrary—we now feel bound to say that if there exist no errors or confusions in the statements contained in that publication—a position we should be very unwilling to assume in relation to any printed report of an American trial—the practice of Dr. Shipman was, in our opinion, correct in every particular except in those debatable and unessential points which were made the subject of stricture in the article to which reference has been already made. On the other hand, nothing is found in the pamphlet to account for or excuse the condition of the patient as therein represented, from the time when the bone was protruded, after the first reduction, until after the removal of the necrosed portion.

Supposing all the evidence to be correctly and completely stated,—had we been the prosecuting party,—not only should we have avoided requesting the withdrawal of the case, but *we would not have permitted it*,—unless under the dire necessity of a pecuniary disability to proceed,—so long as competent surgical evidence and a tolerably intelligent jury were procurable.

We hope the circulation of the pamphlet, painful as it must be to the lovers of professional concord, and, justly or unjustly injurious as it may be to the reputation of individuals even among the witnesses, will have the effect of "placing surgeons on their guard," as to the necessity of keeping pace with the advance of science, and being careful of *courts of justice*, whether as principals or deponents. Alas! that we are compelled to speak so plainly!

R. C.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA MEDICAL SOCIETY.

Session of Nov. 13th, 1841.—Professor Robert M. Huston introduced the discussion of this evening by a series of verbal remarks on the subject of vaccination as an antidote to the contagion of small pox, and many interesting facts were elicited from Drs. Brewer, Bryan, B. Horner Coates, Reynell Coates, Griscom,

Kite, Parrish, Staples, Vandyke, jr., Warrington, and Wiltbank.

The remarks of the lecturer were principally designed to call out the opinion of the profession, and as comments, upon the question which has agitated the public mind since the appearance of the varioloid epidemic, and which is more important at the present moment in consequence of the existing epidemic tendency to small pox in this country. Dr. Huston fully believed, and amply illustrated, the permanent protective influence of vaccination, acknowledging, at the same time, that the perfect security supposed to result from it in the days of Jenner, is not now so generally felt, and that neither the natural or artificial production of true small pox, nor the proper kine pox infection, has proved to be an absolute protection in every case. He quoted a recent instance occurring in the practice of a respectable medical gentleman of this city, which had passed twice through the regular course of well-marked, natural, confluent small pox, with an interval of only six weeks between the two attacks. Two other cases of the recurrence of the modified disease occurring at very short intervals after the first regular attack, were mentioned by other practitioners during the discussion.

Dr. H. is of opinion that the modified disease is now more rife than it was at the time when the operation of vaccination first became general, but that unmodified small pox never occurs after successful vaccination. He inferred that the occurrence of varioloid eruption was rare under such circumstances, from the fact that in his long and extensive practice among children, but three instances had occurred in those on whom he had operated himself, and who continued subject to his inspection in after life: he being cautious never to vaccinate a person not in good health—and delaying the operation, even in those in danger of exposure to contagious miasm, rather than run the risk of an imperfect result, which might permanently prevent the beneficial tendency of future and better timed vaccination.

The general frequency of such occurrences in general practice he appeared to attribute mainly to the operation being so very frequently performed under constitutional conditions of the patient capable of seriously modifying the

effect of the vaccination, and thus diminishing or destroying the preventive power of the disease.

In commenting upon this part of the lecture, Dr. B. H. Coates expressed his decided conviction that a partially successful vaccination might give partial protection against small pox, and lead to the occurrence of mild instead of severe disease from future exposure to the action of the virus.

Dr. Huston inquired what had been the experience of others as to the regularity of the career in the common mode of vaccination from the scab which might have been modified by the transmission of the virus through some hundreds of constitutions, each capable of influencing, to some extent, the character of the disease. His own experience, after reference to the statistics of the age of Jenner, and some experiments performed by himself, or by his medical acquaintance, on matter but a few degrees removed from the cow, led him to believe that the scab rarely adhered for so many days when the operation was performed—as is the almost universal custom in this country—with scabs from those to whom the virus had been transmitted through a great number of individuals, as when the more recent matter was employed. He appeared to be convinced that the duration of the disease was shortened by the constitutional modification of the matter employed, and inferred that this circumstance enhanced the liability to varioloid so frequently exemplified of late years.

This query elicited replies from most of the gentlemen who took part in the debate; but very few accurately recorded observations were quoted. The general impression seemed to be that the termination of the disease, or, rather, the falling of the scab, took place some days earlier now than in the days of Jenner.

Dr. Huston mentioned several striking cases of the powerful protective influence of vaccination under all the disadvantages—if such be acknowledged to exist—resulting from the frequent transfer of the virus.

Some years ago he delivered a female, the mother of nine children, who had all been vaccinated. The family in an adjoining house were labouring under the small pox. Dr. H. vaccinated the infant on the second day. The nurse was deeply pitted with small-pox, and boasted of her security from all attack. Yet

she contracted the disease, and was conveyed to the Bush-hill Hospital. The infant escaped the infection.

In another case, very recently, a lady met an acquaintance in the street, directly from a house in which small pox existed at the time. Alarmed, she sent for Dr. H. to vaccinate her nursing infant. The infant took the vaccine, and, on the ninth day from the insertion of the vaccine matter in its arm, distinct, and well-marked small pox appeared on its mother. The child continued to draw nourishment from her breasts, but without suffering at all from the variolus infection.

During the latter part of the debate, Dr. R. Coates referred to a case occurring in the practice of his brother, and by him narrated in a former discussion before the College of Physicians, in which instance, an infant was vaccinated several days after exposure to the contagion of small pox. The fever and eruption of the latter disease appeared, continued for some days, delaying the access of the vaccine inflammation, then faded and gave place to the vaccine pustule, which afterwards pursued its regular course.

Dr. Huston mentioned several other very striking cases in proof of the protection afforded by vaccination, and the number was increased by the various gentlemen who took part in the debate. He stated that he never performed vaccination in infants, except upon emergencies, before the third or fourth month, and commented upon the impropriety of attempting it while there exist eruptions, sores behind the ears, summer complaint or dentition; dwelling particularly on the general exemption of children from the usual infantile diseases during the continuance of the irritation of the last named process.

The general tendency of the remarks of the lecturer was somewhat in opposition to the idea that revaccination, in cases where the operation had been originally well performed and properly watched, is a necessary precaution.

Dr. Reynell Coates inclined to the opinion of the lecturer on this subject, and commented upon the culpable carelessness of many practitioners in these respects. He dwelt strongly upon the severe effects sometimes resulting from the process of revaccination, such as erysipelatous and absorbent inflammation, stat-

ing that the virus, though harmless to many, always acted as a severe poison to others. He had tried it frequently upon himself and several of his immediate family, and generally with severe consequences.

It was inferable from the observations of Dr. B. Horner Coates, that he was at least doubtful on this subject. Several other gentlemen spoke to this point, but it did not appear that a very general or decided opinion upon it prevailed. Dr. Huston remarked upon the existence of idiosyncracies, which, by giving individuals peculiar exemption might confuse the calculation. Dr. B. H. Coates considered the age of the patient as a cause of diminished liability, and spoke of the acknowledged infrequency of small pox among old persons, and, particularly old white nurses, who should be preferred, on that account, for attendance on the sick. Dr. Warrington inquired if any member had ever seen a second vaccination result in a regular course of disease, and no case was adduced. Dr. B. H. Coates referred to a series of observations by Hufeland, in which that author was induced to conclude that the susceptibility to the reimpression of the virus was increased gradually for a number of years after vaccination. Dr. Wiltbank gave several cases of repeated attacks of varioloid after vaccination. Dr. Vandyke, Jr., Brewer, and others, related cases in which vaccination had produced no effect whatever.

Dr. Bryan quoted the opinion of the President of the Royal Institution in London in opposition to the idea that the vaccine virus became modified by frequent transmission. He gave his own experience in favour of the idea that the effect of virus but a few times removed from the cow was productive of more constitutional disturbance, and severer inflammation. His experience would have been more extensive had not the matter brought over by him from England between glasses, been vitiated by dampness on the voyage, which foreclosed his earlier experiments. This elicited the remark from Dr. Reynell Coates, that he had found the best mode of preserving the purity of vaccine matter for a long time to consist in enveloping the paper containing the scab in waxed bougie cloth, folded and warmed, so as to cause the folds to adhere, and exclude both air and water. Dr. Warrington had made and

witnessed many trials with matter but a few times removed from the cow, and found its effect so severe as to dread its employment in children. The pustule is deeper and the scab more black. Dr. Parrish tried it but once, and was fearful of repeating the experiment from what he had seen and heard of the inflammation. Dr. W. remarked that the vaccine pustule was at this time rare in England, so that it was difficult to procure the original matter. He did not credit the diminished certainty resulting from the frequent transmissions of the virus through successive individuals. He stated that the effects of the more recent matter had rendered Dr. Samuel Jackson (late of Northumberland,) fearful of continuing its use. Some portions of scab but few degrees removed from the cow were produced and distributed among the members, for the purpose of eliciting practical tests in different parts of the United States. A member remarked that the pustule on the cow had not been discovered in this country. Dr. Reynell Coates corrected this error, stating that he had met with individuals who had seen it, and was under the impression, though not perfectly sure, that Dr. Richard Harlan, of this city, had experimented with matter of American origin.

In answer to a question from the last named speaker, in relation to the supposed identity of cow and small pox, Dr. Vandyke, Jr., stated that he had endeavoured, in four instances, without success, to inoculate the cow with the small pox in the West Indies. One of the cows had a small "fester" at the spot wounded, but no proper pustule of any kind occurred in either of them.

Dr. Reynell Coates remarked, that one cause of the failure of attempts to vaccinate, which often perplexes practitioners, and delays the security of the patient, is the habit of operating by simple puncture; the point of the lancet being wiped clean in elevating the cuticle, the virus washed out by the flow of blood which guards the living surfaces with a coagulum, or particles of matter arrested in contact with the inanimate epidermis alone. He stated that, by the ordinary method, the inoculation fails something like once in every three trials; and recommended the following process, which had been successful in every instance in his hands. Prepare the fragment of

the scab, cut fine upon a plate of glass, or the handle of a silver teaspoon, previously moistened by a single drop of water, and the quantity still further reduced by contact with the end of the finger. Rub the fragments into a paste with the water. Then, with the heel of the lancet, abrade the spot chosen for the inoculation until the cuticle is nearly removed, and the blood upon the point of starting. Next, spread the pasty virus upon the surface, moistening it a little more, if necessary, by dipping the point of the lancet in water, and proceed to make a number of slight incisions through the remaining cuticle until traces of blood are visible, without producing actual haemorrhage. Cross these incisions by others at a right angle, by a process like that termed "hatching" by draftsmen, and allow the paste to become dry upon the spot.

Dr. B. Horner Coates preferred positive bleeding from the spot in the first instance, and afterwards preparing the virus, as he had found the moistened matter to become very rapidly diminished in energy by the action of the air. He referred to several authorities and series of observations to prove that, though the varioloid occurred less frequently after natural or inoculated small pox, it presents greater gravity of character in such cases than in those which followed the kine pox inoculation. He stated that his recollection of the observations of others impressed him with the belief that the varioloid epidemics in America, where the scab is almost universally employed, had not been more severe than those occurring in England and France, where resort was usually had to the matter direct from the pustule. He terminated his remarks with an expostulation against the unguarded expressions of doubt on the part of many medical men, which were calculated improperly to shake the faith of the public in the blessings of vaccination.

FOREIGN.

On the Radical Cure of Spina Bifida by a New Operation. By M. DUBOURG, Physician to the Hospital of Marmande.—Having observed that the ordinary method of treating spina bifida, was far from successful, and reflecting that when the soft parts over bones separated by arrest of development are brought together by suture, they have considerable effect in approximating the edges of bone, as in cleft

palate, M. Dubourg concluded that by bringing together the soft parts over the defective spot in the spinal column, a radical cure might be effected by producing permanent approximation of the edges of the bony opening. The first case in which he put his ideas into execution proved unsuccessful, the child having died two days afterwards, but in two other cases the success was complete.

CASE I. In the spring of 1837 I was called to a female infant eight days old, who had a congenital pediculated tumour on the lumbar region, about the size of an apple. Its colour was livid from the development of a venous network, giving it the appearance of a vascular fungus. It was evident on examining the vertebrae that they were defectively formed, the edges of a bony opening being discovered. The tumour was opaque, its walls much thicker than usual, and it appeared that the arrest of development was confined to the last lumbar vertebrae, the child being otherwise healthy and well formed. Having the cautery in readiness in case of severe bleeding from the vascular coverings, and being prepared to prevent the sudden escape of the spinal fluid, an elliptical incision was made around the base of the tumour, when a quantity of reddish serum escaped, and the excision of the sac was readily effected. The finger passed readily into the spinal canal. The edges of the wound were brought together, and four needles being passed, the twisted suture was applied as in a case of hare-lip. The threads were twisted so as to exert as much traction as possible on the contiguous parts, and small compresses were placed at the extremities of the needles to protect the skin. The child cried sharply at the commencement of the operation, but as soon as the fluid escaped from the spinal canal it fell for a few minutes into a state of stupor. It cried again as the needles were applied, and by the time the dressing was completed it took the breast as though nothing had occurred. The needles and sutures were removed on the fourth day, when the edges of the wound were found to be united. Adhesive plaster was applied, and in fifteen days a strong cicatrix, forming a sort of solid button filling up the opening in the vertebrae, was all that remained of this reputed incurable disease. The examination of the removed tumour demonstrated that it was a cyst distended by fluid, communicating with the spinal marrow, bounded behind by the common integument and an expansion of the arachnoid and dura mater. The cavity was not in proportion with the volume of the tumour, for there were several layers of the cellular and adipose tissue between its external and internal surfaces.

CASE II. The next case was similar, except that the swelling was situated over the junction of the last cervical and first dorsal vertebrae. The same operation was performed

except that the sac was not perforated in the first incision; a lateral flap being formed with a narrow bistoury from within outwards, and the sac being then removed and the other flap formed by a second incision. The needles and sutures were applied as soon as possible to prevent the loss of any considerable quantity of spinal fluid, and the access of air. The child recovered without an unfavorable symptom and continues well, eighteen months after operation.

The following are the conclusions drawn from these cases by the author, some of which, at least, are premature:

1. Some cases of spina bifida are susceptible of a radical cure.
 2. Instead of abandoning to their fate most children born with this malformation, those should be selected in which this operation might be efficacious.
 3. Although it is impossible absolutely to establish limits of incurability, every child born with a spina bifida, of which the opening of communication with the spine does not exceed an inch in diameter should be submitted to operation.
 4. Ablation of the tumour and the twisted suture constitute the best operation.
 5. It is well to open the spinal canal as late as possible in the operation, and to make the opening narrow.
 6. When the sac is formed by the meninges, only the skin being atrophied over the tumour, the skin must be dissected on each side of the vertebrae, and the edges of the integuments united as in hare-lip.
 7. The probability of reunion is proportionate to the size of the osseous opening and the general state of the patient.
 8. The spinal canal may be opened, the spinal marrow laid bare, and a considerable portion of the fluid which bathes this important organ lost with impunity.—*Brit. and For. Med. Rev., from Gazette Medicale de Paris, Juillet 31, 1841.*
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- On the Chorda Dorsalis.* By MARTIN BARRY, M.D., F.R.S., L. & E.—The author of this communication, after pointing out the similarity in appearance between an object noticed by him in the mammiferous ovum, and the incipient chorda dorsalis described by preceding observers in the ova of other vertebrates, mentions some essential differences between his own observations and those of others, as to the nature and mode of origin of these objects, and their relation to surrounding parts. Von Baer, the discoverer of the chorda dorsalis, describes this structure as “the axis around which the first parts of the foetus form.” Reichert supposes it to be that embryonic structure which serves as “a support and stay” for parts developed in two halves. The author’s observations induce him to believe that, instead of being “the axis around which the first parts of

the fœtus form," the incipient chorda is the last-formed row of cells, which have pushed previously-formed cells farther out; and that, instead of being merely "a support and stay" for parts developed in two halves, the incipient chorda occupies the centre out of which the "two halves" originally proceeded as a single structure, and is itself in the course of being enlarged by the continued origin of fresh substance in its most internal part.

The author enters into a minute comparison of the objects in question, from which it appears that the incipient chorda is not, as Baer supposed, developed into a globular form at the fore end, but that the linear part is a process from the globular, and that the pellucid cavity contained within the latter—a part of prime importance, being the main centre for the origin of new substance—is not mentioned by Von Baer. Farther, that the origin of the "laminæ dorsales" of this naturalist (the "central nervous system" of Reichert) is not simultaneous with, but anterior to, that of the chorda.

The author then reviews the observations of Rathke and Reichert on the chorda dorsalis, which contain internal evidence, he thinks, of a process in the development of fishes, reptiles and birds, the same as that which he has observed in mammalia, namely, the origin of the embryo out of the nucleus of a cell.

And it is his opinion that this observation may assist to solve a question on which physiologists are not agreed; for it shows that if the nucleus of a cell is a single object, the first rudiments of the embryo are not two halves. The author thinks that unless the very earliest periods are investigated, it is in vain that we attempt to learn what that is of which the rudiments of the embryo are composed. From not attending to this, physiologists have supposed their "primitive trace" to arise in the substance of a membrane, which the author, in his second series on the embryo, showed could not be the case. To the same cause, he thinks, is referrible an opinion recently advanced by Reichert, that the first traces of the new being are derived from cells of the yolk.—*Ib., from Proceedings of the Royal Society. 1841.*

DOMESTIC.

In relation to the condition of distant schools the intelligence that flows in upon us through public channels, comes often in "such a questionable shape, we cannot even speak it." When the struggle of competition is over for the season, the number of matriculations is accurately ascertained. But who shall, even then, determine the number of men of straw that are made to assist in swelling the nominal amount of the class? As for the flourishes of trumpets in newspapers and introductory about the peculiar advantages of particular

colleges, we estimate them—if at all—in inverse proportion to their loudness. The school or the teacher that swells largest on paper, is usually the first to explode in practice. From private sources we derive some facts. The old school of New York has certainly about one hundred pupils, and a prospect before it unusually bright. Of the class of the new school, we know nothing authentic from disinterested testimony, and are not inclined to guess. The class of Louisville numbers about two hundred and fifty. Our own appears a very little diminished in numbers, from the absence of the usual number of established practitioners who visit us to review and extend their knowledge. The number of students of the first and second course does not vary appreciably from the average. R. C.

INTERMENTS in the City and Liberties of Philadelphia, from the 13th to the 20th of November.

Diseases.	Adults.	Children.	Diseases.	Adults.	Children.
Asthma,	1	0	Brought forward,	38	33
Abscess [in the breast,	0	1	Malformation of the Heart,	0	1
Apoplexy	2	0	Mortification of the stomach,	1	0
Burns,	0	1	Mania a Potu,	1	0
Casualty,	1	0	Morbus Cole-		
Croup,	0	3	reus,	0	1
Consumption of the lungs,	16	3	Old age,	2	0
Contusion,	1	6	Palsy,	2	0
Dropsy, abdominal,	1	0	Scirrhous of Bylo-		
— Head,	0	1	rus,	1	0
— Breast,	3	0	Small pox,	2	6
Disease of the brain,	0	1	Still-born,	0	13
— Heart,	1	0	Tetanus,	0	1
— Lungs,	0	1	Teething,	0	1
— Bowels,	0	1	Unknown,	0	1
Dysentery,	2	0	Total,	104	47 57
Debility	0	2	Of the above, there		
Fever,	2	0	were under 1 year,	29	
— Brain,	0	1	From 1 to 2	8	
— Remittent,	0	2	2 to 5	10	
— Puerperal,	1	0	5 to 10	8	
— Scarlet,	0	1	10 to 15	1	
Gangrene,	1	0	15 to 20	1	
Inflammation of the Brain,	2	0	20 to 30	12	
— Bronchi,	0	1	30 to 40	19	
— Lungs,	1	5	40 to 50	5	
— Stomach and Bowels,	1	0	50 to 60	3	
— Bowels,	1	0	60 to 70	1	
— Peritonæum,	0	1	70 to 80	1	
Intemperance,	1	0	80 to 90	4	
Marasmus,	0	2	90 to 100	0	
			Total,		104
			Carried forward,	38	33